

## A NEW SPECIES OF THE GENUS *ALTICA* GEOFFROY (COLEOPTERA, CHRYSOMELIDAE, ALTICINAE) FROM CHINA

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**Abstract** A new species *Altica elaeagnusae* from Xinjiang, China is described. The host plants and distribution of the Chinese known species of the genus *Altica* Geoffroy are given. Illustrations of habitus, head, aedeagus, spermatheca, vaginal palpi and tignum of the new species are also given.

**Key words** Coleoptera, Chrysomelidae, Alticinae, *Altica*, new species, China.

The genus *Altica* was established by Geoffroy in 1762, the type species is *Chrysomela oleracea* L., 1754. It is a large genus of flea beetles with over 300 known species in the world. Among them, 28 species are distributed in China, and 6 of them are endemic species.

There were some important works dealing with the Chinese species of the genus *Altica*, including Ogloblin (1921, 1925), Chen (1936), Ohno (1960), Gressitt and Kimoto (1963), Scherer (1969), Lopatin (1977), Chen and Wang (1981), Wang (1992, 1996), Gruev and Döberl (1997), Wang (2005). In this paper, we thoroughly studied the Chinese species of the genus, with a description of one new species. We also give a list of all Chinese known species of this genus including host plants and distribution. Type specimens are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZCAS).

*Altica elaeagnusae* sp. nov. (Figs. 1-9)

**Description** Body elongate (Figs. 1). Length 5.5-5.8 mm (measured from the apex of the clypeus to the apex of the elytra); width 3.0-3.2 mm (measured at the broadest part of the elytra). Color: dorsal side metallic dark blue, apices of mandibles reddish brown, ventral side of body almost black, with apices of tibiae and tarsi somewhat lighter in color.

Head with vertex very smooth, almost without punctures, but shagreened. Frontal tubercles triangular, distinct and very convex, surface smooth, with apex slightly rounded, separated by a longitudinal groove and delimited from the vertex by several

shallow transverse grooves. Inter antennal space with a very convex longitudinal carina, each side with some coarse punctures. Frontolateral sulcus well developed and distinct, suprafrontal sulcus short but deeper, midfrontal sulcus broader, supracallinal sulcus shallower, orbital sulcus less developed. Clypeus slightly convex, broad and with some punctures near anterior margin (Figs. 2-3). Antennae extending about half the elytra, the first segment clubbed, second shortest, third longer and more slender than second, the three basal segments almost without pubescence, the rest with gradually denser pubescence, apex of last segment acute, length of segments 1 to 11 (averaged for type species) in millimeters: 0.14, 0.07, 0.10, 0.12, 0.13, 0.11, 0.11, 0.10, 0.11, 0.10, 0.12.

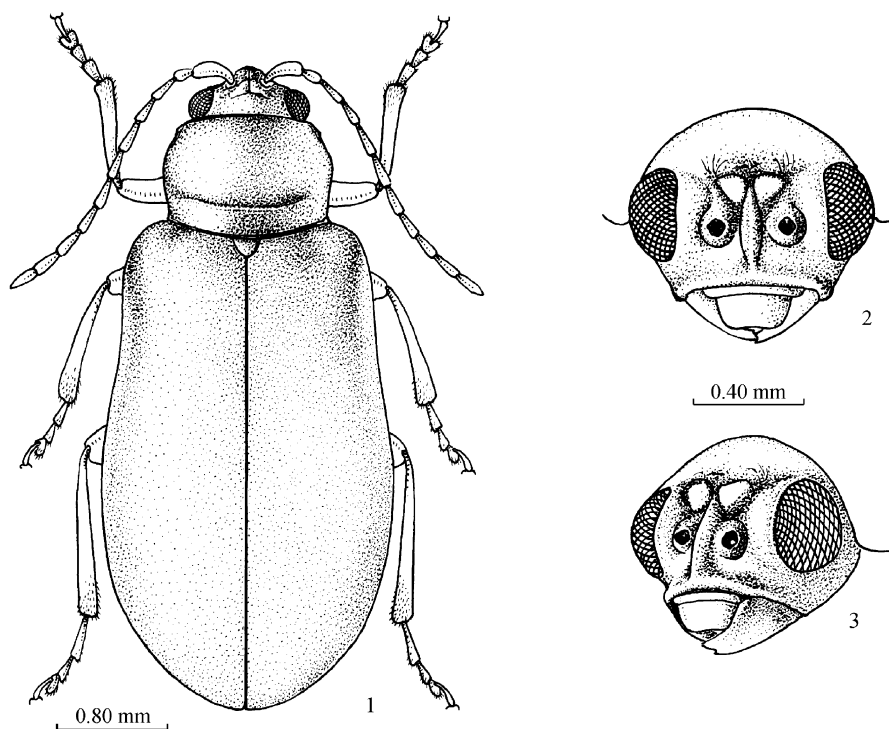
Pronotum very convex, length 1.3-1.5 mm (measured at middle part); width 1.6-1.8 mm (measured at middle part), anterior margin almost straight, lateral margin slightly rounded, posterior margin arched at median part, anterior angle protruding downwards, thickened, with apex acute, posterior angle obtuse; central disc with fine and shallow punctures, lateral areas with more coarse punctures, a transverse groove before the posterior margin, extending almost to both sides, with a concavity at each side. Scutellum triangular, without punctuation but shagreened.

Elytra broader than pronotum at the base, length 4.3-4.5 mm; width 2.0-2.2 mm, with close and distinct punctures which are bigger than pronotum, interstice shagreened, humeral callus convex, surface with fine punctures. Epipleuron broadened at the base,

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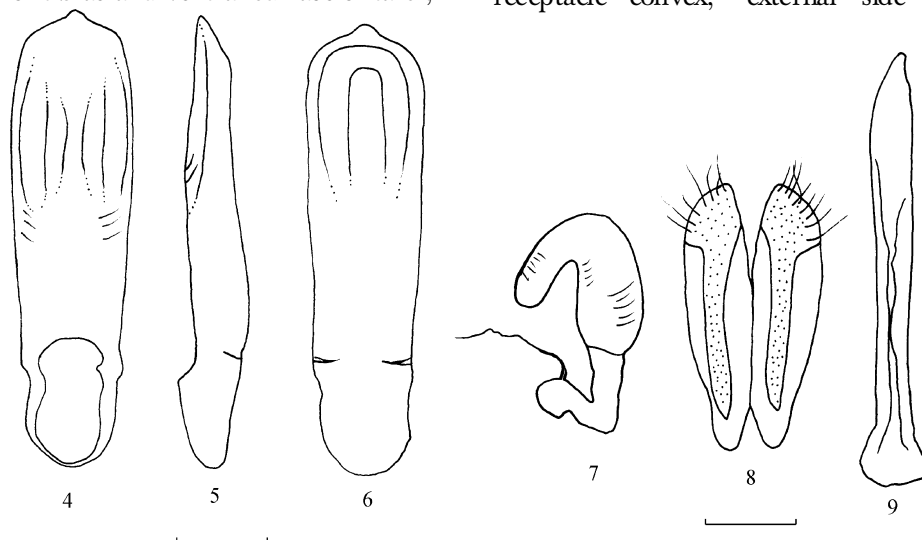


Figs. 1-3. *Altica elaeagnusae* sp. nov. 1. Habitus, dorsal view. 2. Head, frontal view. 3. Head, frontolateral view.

gradually narrowing posteriorly.

Underside. Prosternum impunctate, with some wrinkles; apex truncate, narrowing between anterior coxal cavities, anterior coxal cavities opened behind, mesosternum slightly narrowed and shagreened; metasternum with coarse punctures and densely pubescent, with a shallow longitudinal groove at the median part. Abdominal sternite densely pubescent, with shallow punctures. Last sternite of male trilobed, while in female rounded. Legs: pubescent, especially on lateral margin of tibiae and ventral surface of tarsi;

femur highly inflated, tibiae slender, third segment of tarsi bilobed. Claws appendiculate. Aedeagus with a very small denticle at the apex, in ventral view each side with 2 short longitudinal grooves near the apex, and somewhat convex in the middle part (Fig. 4), more straight in lateral view and slightly acute at the apex, with small concavity about 1/3 from apex (Fig. 5), in dorsal view with a narrow longitudinal sclerotized part in the middle (Fig. 6). Spermatheca with receptacle longer than pump. Internal side of receptacle convex, external side almost straight.



Figs. 4-9. *Altica elaeagnusae* sp. nov. 4. Ventral view of aedeagus. 5. Lateral view of aedeagus. 6. Dorsal view of aedeagus. 7. Spermatheca. 8. Vaginal palpi. 9. Tignum. Scale bars: 4-6= 0.4 mm, 7-9= 0.2 mm.

Receptacle elongate, longer than wide, maximum width at basal part. Pump moderately narrow at horizontal part and curved in lateral view; vertical part of pump shorter than horizontal part. Duct not exceeding half the receptacle length, making a very narrow loop away from it (Fig. 7). Vaginal palpi with membranous middle part, nearly as long as the sclerotized part, lateral margin almost parallel to medial, pointed apically, median margin almost straight (Fig. 8). Tignum nearly straight, slightly broadened at base and somewhat acute at apex, well sclerotized (Fig. 9).

Holotype ♂, China, Xinjiang Autonomous Region, Ruoqiang, Waxxari, 1 080 m, 27 Apr. 1960, coll. WANG Shu Yong. Paratypes: 180 ♂ ♂,

156 ♀ ♀, the same data as holotype (IZAS).  
Etymology. This new species is named after its host plant: *Elaeagnus angustifolia* Linn.  
Remarks. This new species is closely related to *A. deserticola* (Weise), but we can distinguish it by the following characters: color of the new species is dark blue, with frontal tubercles triangular, elytra punctures finer and less deep, interstice without small punctures, color of the latter is violaceous, with the frontal tubercles elongate and oblique, elytra with more distinct, coarse punctures, interstice with more small punctures.  
Distribution. China, Xinjiang.  
Host plant. *Elaeagnus angustifolia* Linn.

Table 1. Distribution and host plants of Altica Geoffroy of Chinese known species.

Species	Host plants	Distribution
<i>A. alticola</i> Wang		China: Sichuan
<i>A. koreana</i> (Ogloblin)	<i>Potentilla chinensis</i> Ser	China: Hebei; Korea
<i>A. bisulcata</i> Weise		China: Heilongjiang; Mongolia, Russia
<i>A. brevicosta</i> (Weise)		China: Zhejiang, Taiwan, Guangdong, Hainan, Guangxi, Yunnan; Vietnam, India, Philippines, Indonesia
<i>A. caerulea</i> (Baly)	<i>Acalypha australis</i> Linn., <i>Fatua villosa</i> (Thunb.) Nakai	China: Beijing, Jiangsu, Zhejiang, Hubei, Jiangxi, Fujian, Taiwan, Guangdong, Sichuan; Korea, Japan, India
<i>A. circicola</i> Ohno	<i>Cirsium</i> Mill	China: Heilongjiang, Jilin, Gansu, Xinjiang, Beijing, Shandong, Jiangsu, Hubei, Hunan, Fujian, Sichuan, Yunnan; Japan, Central Asia, Canada, Europe
<i>A. carinthiaca</i> Weise		China: Xinjiang; Russia, Central Asia, Europe
<i>A. coerulea</i> (Olivier)	<i>Ludwigia</i> Linn.	China: Fujian, Taiwan, Guangdong, Hainan; N. Vietnam, India, Sri Lanka, Kashmir, Indonesia, Philippines
<i>A. cyanea</i> (Weber)	<i>Ludwigia</i> Linn.	China: Beijing, Shanxi, Anhui, Zhejiang, Hubei, Jiangxi, Hunan, Fujian, Taiwan, Guangdong, Hainan, Guangxi, Sichuan, Guizhou, Yunnan, Xizang; Korea, Japan, Vietnam, Laos, Thailand, Burma, India, Sri Lanka, Nepal, Afghanistan, Philippines, Malaysia, Singapore, Indonesia, Australia
<i>A. deserticola</i> (Weise)	<i>Glycyrrhiza glabra</i> Linn.	China: Jilin, Qinghai, Xinjiang, Taiwan, Sichuan; Mongolia, S. E. Russia, Korea, C. Asia, Israel, Jordan, E. Europe, America
<i>A. elaeagnusae</i> sp. nov.	<i>Elaeagnus angustifolia</i> Linn	China: Xinjiang
<i>A. foveicollis</i> (Jacoby)		China: Hainan; N. Vietnam, Burma, India
<i>A. fragariae</i> (Nakane)	<i>Duchesnea indica</i> (Andrews) Focke, <i>Fragaria ananassa</i> Duch. <i>Potentilla centigrana</i> Maxim, <i>P. wallichina</i> Del., <i>P. flagellaris</i> Willd. <i>Geum aleppicum</i> Jacq., <i>Agrimonia pilosa</i> Ledeb	China: Jilin, Beijing, Shandong, Jiangsu, Hunan, Hubei, Fujian, Guizhou, Japan
<i>A. himalayensis</i> (Chen)	Euphorbiaceae	China: Taiwan, Xizang; India, Nepal
<i>A. japonica</i> Ohno	<i>Ludwigia prostrata</i> Roxb	China: Anhui, Zhejiang, Taiwan; Korea, Japan
<i>A. kozlovi</i> (Ogloblin)		China: Gansu
<i>A. latericosta</i> (Jacoby)	<i>Salix</i> Linn.	China: Gansu, Sichuan
<i>A. lubischevi</i> (Pali)	Betulaceae	China: Xizang; Tajikistan, Kirghizstan, Kazakhstan, Turkmenistan
<i>A. oleracea</i> (Linnaeus)	<i>Oenothera odorata</i> Jacq., <i>Epilobium angustifolium</i> Linn. <i>Cirsium</i> Mill., <i>Polygonum</i> Linn., <i>Erica</i> Linn.	China: Heilongjiang, Xinjiang, Hebei, Guangxi, Sichuan, Yunnan; Central Asia, Korea, Mongolia, Russia, Turkey, Europe
<i>A. pamiranica</i> (Weise)	<i>Fragaria</i> Linn., <i>Geranium nepalense</i> Sweet., <i>Atraphaxis</i> Linn.	China: Heilongjiang, Gansu, Qinghai, Xinjiang, Shanxi; Tajikistan, Kirghizstan, Kazakhstan
<i>A. pyriformis</i> (Jacobsen)		China: Inner Mongolia, Xizang; Mongolia
<i>A. sanguisorbae</i> Ohno	<i>Sanguisorba officinalis</i> Linn.	China: Heilongjiang, Inner Mongolia, Beijing, Hebei, Shandong; Japan
<i>A. semenovi</i> (Jacobsen)	Salicaceae	China: Xijiang; Tajikistan, Kirghizstan, Kazakhstan, Uzbekistan
<i>A. transbaikica</i> Ogloblin		China: Inner Mongolia, Qinghai, Xinjiang; Russia, Europe

Continue Table 1

Species	Host plants	Distribution
<i>A. viridicyanea</i> (Baly)	<i>Geranium nepalense</i> Sweet	China: Heilongjiang, Jilin, Beijing, Hebei, Shandong, Jiangsu, Zhejiang, Hubei, Fujian, Guangdong, Hongkong, Guangxi, Sichuan, Guizhou, Yunnan; Korea, Japan, India
<i>A. weisei</i> (Jacobson)	<i>Salix</i> Linn.	China: Heilongjiang, Jilin, Liaoning, Inner Mongolia, Xinjiang, Beijing, Hebei, Shanxi, Henan, Shaanxi, Jiangsu, Sichuan, Xizang; Mongolia, Russia, Korea
<i>A. yunnana</i> Wang	<i>Epilobium hirsutum</i> Linn.	China: Yunnan
<i>A. zangana</i> Chen et Wang	<i>Epilobium hirsutum</i> Linn.	China: Sichuan, Xizang

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REFERENCES

Chen, S-X 1936. Notes on some flea beetles from Tropical Asia (2). *Sinensia*, 7 (1): 80-88.

Chen, S-X and Wang, S-Y 1981. Coleoptera: Chrysomelidae: Alticinae. *In*: Insects of Xizang, 1. Science Press, Beijing, China. 491-508.

Gressitt, J. L. and Kimoto, S. 1963. The Chrysomelidae (Coleoptera) of China and Korea. Part 2. *Pacific Insects*, 1B: 739-893.

Gruve, B. and Doberl, M. 1997. General distribution of the flea Beetles in the Palaearctic subregion (Coleoptera: Chrysomelidae: Alticinae). *Scopolia*, 37: 1-496.

Lopatin, I. K. 1977. Leaf beetles of Central Asia and Kazakhstan.

*Opradeliteli Faune SSSR*, 113: 4-268.

Ogloblin, D. A. 1921. Espèces nouvelles de la tribu Halticina de la region Palearctique (Coleoptera: Chrysomelidae). *Revue Russe d'Entomologie*, 17: 20-40.

Ogloblin, D. A. 1925. Einige neue *Haltica*-Formen aus der paläarktischen Region. *Revue Russe d'Entomologie*, 19: 91-96.

Ohno, M. 1960. On the species of the genus *Altica* occurring in Japan. *Bulletin of the Department Liberal Arts*, 1: 77-95.

Scherer, G. 1969. Die Alticinae des Indischen Subcontinents (Coleoptera: Chrysomelidae). *Pacific Insects*, 22: 1-251.

Wang, S-Y 1992. Coleoptera: Chrysomelidae: Alticinae. *In*: Insects of the Hengduan Mountains Regions, 1. Science Press, Beijing, China. 675-753.

Wang, S-Y 1996. Coleoptera: Chrysomelidae: Alticinae. *In*: Economic Insect Fauna of China. Fasc. 54. Science Press, Beijing, China. 196-299.

Wang, S-Y, Cui, J-Z, Li, W-Z and Zhang, Y 2005. The feeding habits of the genus *Altica* and biological significance. *Chinese Bulletin of Entomology*, 42 (4): 385-390.

中国跳甲属一新种记述 (鞘翅目, 叶甲科, 跳甲亚科)

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**摘 要** 跳甲属 *Altica* Geoffroy 为一世界广布属, 全世界记载 300 余种。本文研究了中国的种类, 包括分布于新疆的 1 新种, 中国共记载了 28 种。文中提供了新种的形态描述、整体图、形态特征图及雌雄外生殖器图, 同时给出了中国分布种类的名录、分布和寄主植物记录。新种模式标本保存于中国科学院动物研究所。

沙枣跳甲, 新种 *Altica elaeagnusae* **sp. nov.** (图 1~ 9)

新种同 *Altica deserticola* (Weise) 非常近似, 但可以通过

**关键词** 鞘翅目, 叶甲科, 跳甲亚科, 跳甲属, 新种, 中国。  
中图分类号 Q969. 48

以下特征加以区分: 新种体色深蓝色, 额瘤三角形, 鞘翅刻点排列混乱、较浅细, 大刻点间没有小刻点; 后者体色为紫罗兰色, 额瘤长形、斜放, 鞘翅刻点粗显, 大刻点间散布微细刻点。

正模 ♂, 新疆若羌瓦石峡, 1 080 m, 1960-04-27, 王书永采。副模 180 ♂♂, 156 ♀♀, 同正模 (保存于中国科学院动物研究所)。